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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/700,299	11/13/2000	Tetsuo Shimomura	10089/13	3365

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EXAMINER

ASSAF, FAYEZ G

ART UNIT

PAPER NUMBER

2872

DATE MAILED: 04/24/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/700,299

Applicant(s)

SHIMOMURA ET AL.

Examiner

Fayez G. Assaf

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 08 February 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1,2 and 4-17 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,2,4 and 6-17 is/are rejected.
- 7) ☒ Claim(s) 5 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) ✓
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 9.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

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**DETAILED ACTION**

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 2, 4 and 6-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yao et al. (WO 97/38855) in view of Sakagami et al. (Jp 07-134209).

Yao discloses an infrared absorption filter which has a transmittance of not higher than 30% in the near-infrared region in the wavelength range of 800 to 1100 nm (see Fig. 4), a difference of 10% or less between maximum value and a minimum value of transmittance in the visible light region in the wavelength range of 450 to 650 nm, and a transmittance of not lower than 50% at a wavelength of 550 nm (see Fig. 4), the filter having an infrared absorbing layer on a transparent substrate, and the infrared absorbing layer being composed of a coloring matter, dye or pigment absorbing infrared radiation and

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a polymer serving as a dispersing medium (claim 2; see sections [0008])). Yao does not disclose the mechanical test of the filter, in that, the filter being left to stand in the air atmosphere at a temperature of 60 degrees Celsius and a humidity of 95% for 1000 hours, after which the filter has, a transmittance of not higher than 30% in the near-infrared region in the wavelength range of 800 to 1000 nm, and a difference of 10% or less between maximum value and a minimum value of transmittance in the visible light region in the wavelength range of 450 to 650 nm. However, such testing of mechanical and environmental stability of is well known in the art as being disclosed by Sakagami (see section [0045])).

It would have been obvious, at the time the invention was made, to provide the mechanical and environmental stability test as being taught by Sakagami for the purpose of assuring the reliability of the optical system.

Regarding claim 4, the combination discloses the amount of a solvent remaining in the infrared absorbing layer being 5.0 wt.% or less (see yao, section [0011])).

Regarding claim 6, the combination discloses the transparent substrate being a polyester film (Yao, see section [0009])).

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Regarding claims 7 and 8, the combination discloses the polyester constituting the infrared absorbing layer having inherently a glass transition temperature of not lower than 80 degrees Celsius.

Regarding claims 9 and 10, the combination discloses the filter having an electroconductive layer of metal mesh (Yao, see section [0047]) having inherently an aperture ratio of not less than 50% on the same side as the infrared absorbing layer of the filter or on the opposed side thereof.

Regarding claims 11, 12 and 13, the combination discloses the electroconductive layer being formed of a metal oxide (see section [0046]), at least three layers being laminated in the order of metal oxide/metal/metal oxide (see section [0048]), wherein the electroconductive layer being formed of silver (see section [0067]).

Regarding claims 14-17, the combination discloses a hard coating, an antireflection layer or an antiglare layer formed as an outermost layer of the filter which is disposed in front of a plasma display (see sections [0001] and [0046]).

Regarding claim 2, the combination discloses the claimed invention including testing the filter at 60 degrees Celsius (Sakagami, see section [0044]). Sakagami does not teach testing

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the filter at 80 degrees Celsius. However, testing the filter at higher temperatures such as 80 degrees is conventional.

It would have been obvious, at the time the invention was made, to a person having ordinary skill in the art to perform such a test so as to insure reliability. Further, it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. In re Boesch, 617 F.2d 272, 205 USPQ 215 (CCPA 1980).

#### ***Allowable Subject Matter***

Claim 5 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claim 5 is allowable over the prior art for at least the reason that the prior art fails to teach or reasonably suggest the transparent substrate having a total light transmittance not lower than 89%, a haze of not higher than 1.6%, a coefficient of static friction of not higher than 0.6 and a coefficient of dynamic friction of not higher than 0.6 as set forth in the claimed combination.

#### ***Conclusion***

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Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Fayez Assaf whose telephone number is (703) 306-5526. The fax number for the organization where this application or proceeding is assigned is (703) 308-7722.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

*FA*

Fayez Assaf

4/19/2002



**Cassandra Spyrou**  
**Supervisory Patent Examiner**  
**Technology Center 2800**